



Plexiglas® Diffuse Ultra™ V045-68210

Acrylic Resin Technical Data Sheet

PROPERTIES ¹	PLEXIGLAS® DIFFUSE ULTRA™ V045-68210	UNIT OF MEASURE	TEST METHOD
PHYSICAL			
Melt Flow Rate (230°C/3.8 kg)	1.2	g/10 min	ASTM D1238
Specific Gravity	1.18	--	ASTM D792
Mold Shrinkage	0.2 – 0.6	%	ASTM D955
Water Absorption (24 hr immersion)	0.3	% wt gain	ASTM D570
MECHANICAL			
Tensile Strength @ Maximum	69 (10)	MPa (kpsi)	ASTM D638
Tensile Elongation @ Break	10	%	ASTM D638
Tensile Modulus	3.3 (480)	GPa (kpsi)	ASTM D638
Flexural Strength @ Maximum	100 (15)	MPa (kpsi)	ASTM D790
Flexural Modulus	2.8 (400)	GPa (kpsi)	ASTM D790
Notched Izod Impact @ 23°C (73°F)	25 (0.5)	J/m (ft-lb/in)	ASTM D256
Rockwell Hardness	84	M-Scale	ASTM D785
THERMAL			
DTUFL - 0.455 MPa/66 psi, annealed ²	104 (220)	°C (°F)	ASTM D648
DTUFL - 1.82 MPa/264 psi, annealed ²	103 (218)	°C (°F)	ASTM D648
Vicat Softening Point - 50°C/hr, 10N	109 (228)	°C (°F)	ASTM D1525
Vicat Softening Point - 50°C/hr, 50N	101 (214)	°C (°F)	ASTM D1525
Flammability	HB	Class	ASTM D635
OPTICAL³			
Refractive Index (N _d @ 23°C/73°F)	N/A	--	ASTM D542
Luminous Transmission (2.0 mm/0.080")	52	%	ASTM D1003
Haze (2.0 mm/0.080")	>100	%	ASTM D1003
CLASSIFICATION			
ASTM Classification	0131TOV1	--	ASTM D788

1 - Values reported are averages measured on 3.2 mm (0.125") thick samples (unless otherwise noted) and should not be used for specification purposes.

2 - Deflection Temperature Under Flexural Load (DTUFL) Annealing Cycle: 16 hours @90°C (194°F).

3 - Optical properties measured using extruded sheet samples, and haze reading >30% reported for informational purposes.

TRANSMISSION AND HIDING PERFORMANCE OF PLEXIGLAS® FROSTED AND PLEXIGLAS® DIFFUSE™ RESINS

EXTRUDED SHEET MATERIAL	SAMPLE THICKNESS	25% LOADING		50% LOADING		100% LOADING		
		TRANS %	HIDING %	TRANS %	HIDING %	TRANS %	HIDING %	
PLEXIGLAS® FROSTED	V045-68177 & DR®-66080	0.060"	92	23	92	40	92	60
		0.080"	92	25	92	44	92	66
PLEXIGLAS® FROSTED	V045-68207	0.060"	Used as-is for Injection Molding and Extrusion Applications				91	82
		0.080"					89	85
PLEXIGLAS® DIFFUSE™	V045-68209	0.060"	92	68	91	81	93	91
		0.080"	92	73	89	86	79	92
PLEXIGLAS® DIFFUSE™	DR®-66151	0.060"	68	93	57	95	47	95
		0.080"	61	94	50	95	40	95
PLEXIGLAS® DIFFUSE™	Ultra™ V045-68210	0.060"	80	91	67	95	58	95
		0.080"	73	93	59	95	53	95

The transmission and hiding performance properties shown in the chart above are dependent on process, processing conditions, sample thickness, etc. The properties above have been measured using Perkin Elmer Lambda 950, where Hiding Performance = $[T(0'') - T(2'')]/T(0'')$.



JNS 1019

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